

Narkomed GS

Exclusion System Enhancement

INSTALLATION PROCEDURE

NOTE: The vaporizers do not have to be drained in order to complete this procedure.

WARNING: Do not tilt a vaporizer that contains anesthetic agent more than 45 degrees. Failure to observe this precaution will render the vaporizer handwheel calibration invalid.

NOTE: Should a vaporizer containing anesthetic agent be accidentally tilted more than 45 degrees, it must be drained and flushed in accordance with instructions given in the manual supplied with the vaporizer.

NOTE: Each vaporizer is held to the machine by two 3 mm socket head screws. these screws are located at the back of the vaporizer manifold, and are accessible by removing the cover from the interlock mechanism as shown in Figure 1.

1. Turn the System Power switch to STANDBY.
2. Set all vaporizer handwheels to their Zero or OFF position.
3. Remove the back cover from the vaporizer interlock mechanism. See Figure 1.
4. While holding the vaporizer, remove the mounting screws and carefully separate each vaporizer from the machine. Note the position of each vaporizer so it can later be reinstalled in the same position.

INSTALLATION PROCEDURE (continued)

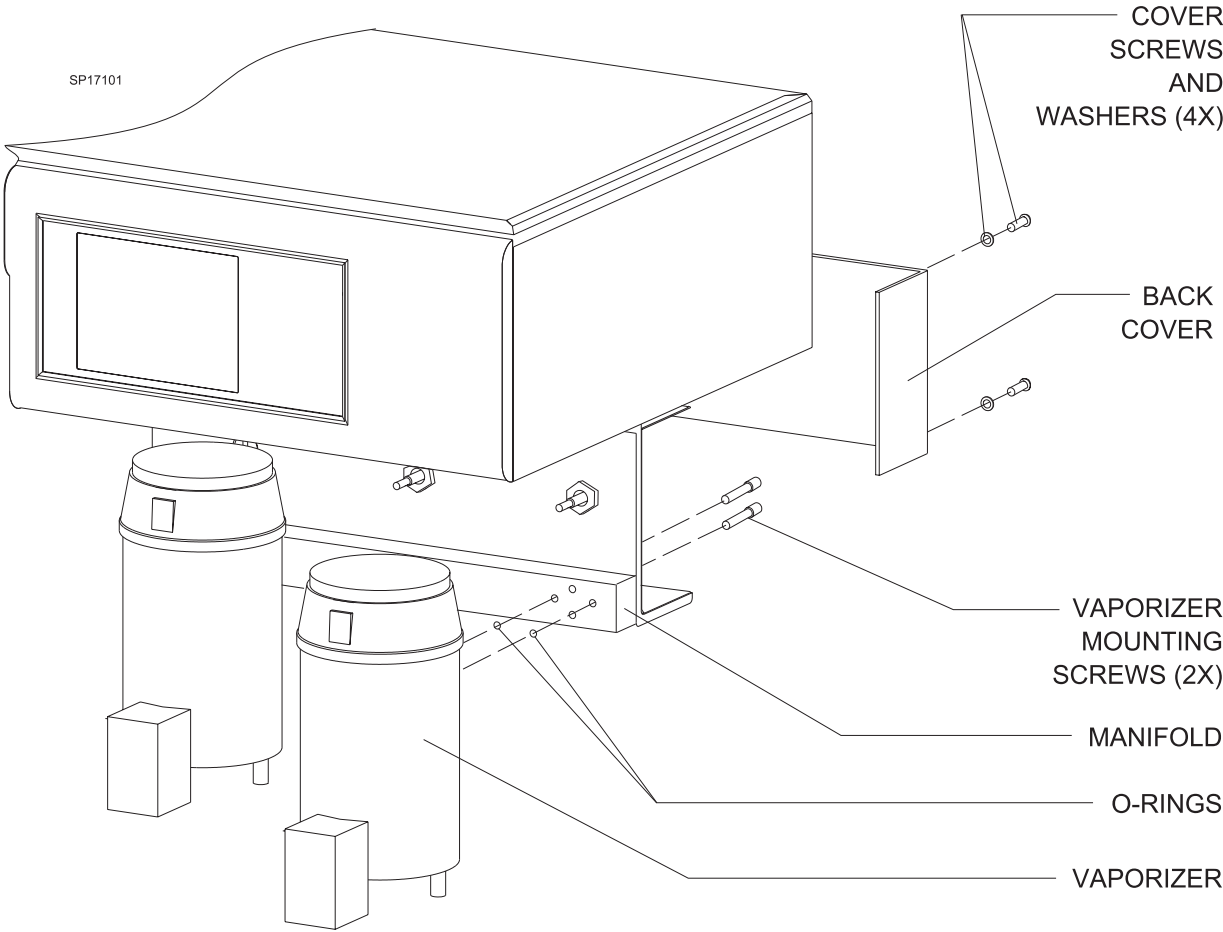


Figure 1: VAPORIZER REMOVAL

INSTALLATION PROCEDURE (continued)

5. Using a $\frac{3}{4}$ in. wrench, remove the bushing from the right (viewed from the front of the machine) vapor mount. See Figure 2.

NOTE: It is not necessary to remove the microswitch or its actuator adjustment screw.

6. Turn the plunger screw clockwise (viewed from the back of the machine) to remove it from the plunger block.

7. Remove the plunger screw spring.

8. Apply teflon tape to the replacement bushings.

9. Install the supplied replacement bushing, plunger screw and spring as shown in Figure 2.

Thread the plunger screw into the plunger block until the screw is flush with the plunger block.

NOTE: When tightening the bushing, verify that the block housing sits on and maintains contact with the raised edge along the inside of the vapor box.

10. Repeat Steps 5 thru 9 for each of the remaining vaporizer positions.

11. Verify that the horizontal shafts rotate freely and move back and forth with minimal resistance.

12. Reinstall each vaporizer in its original position on the machine (verify that the O-rings are in place) and tighten the mounting screws to a torque of 24 to 26.5 inch pounds.

13. Discard the original plunger screw, spring and bushing.

Perform the adjustment and test procedures on the following pages.

INSTALLATION PROCEDURE (continued)

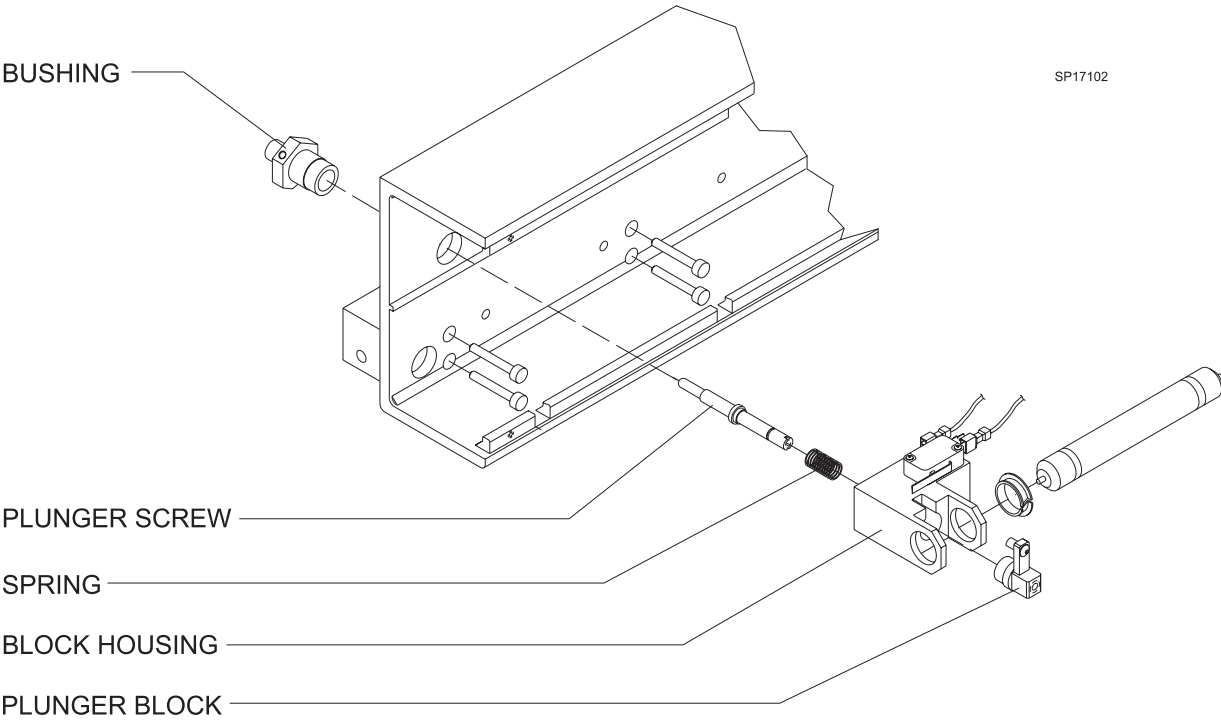


Figure 2: EXCLUSION SYSTEM ASSEMBLY

ADJUSTMENT PROCEDURE

The following procedure describes the interlock adjustment on a 3-vaporizer machine. The same principles apply on a 2-vaporizer machine.

1. Turn the center vaporizer to an ON position.
2. Turn the center plunger adjustment screw until the distance between the plunger block and the small pins on the horizontal shafts is approximately 0.066 in. See Figure 3.
3. Set the left vaporizer handwheel to the center of its OFF position.
4. Turn the left vaporizer plunger adjustment screw until the bevel on the plunger block just touches the bevel on the horizontal shaft. Verify that the handwheel is still in the center of its OFF position. Once the bevels are touching, turn the adjustment screw counter-clockwise $1\frac{1}{4}$ turns.
5. Repeat Step 3 for the right vaporizer.
6. Repeat Step 4 for the right vaporizer.
7. Turn the center vaporizer handwheel to OFF.
8. Turn the left vaporizer to an ON position.
9. Repeat Step 3 for the center vaporizer.
10. Repeat Step 4 for the center vaporizer.
11. Turn the left vaporizer handwheel to OFF.
12. Set all the vaporizers to their OFF (locked) position. Verify that each vaporizer can be turned on.

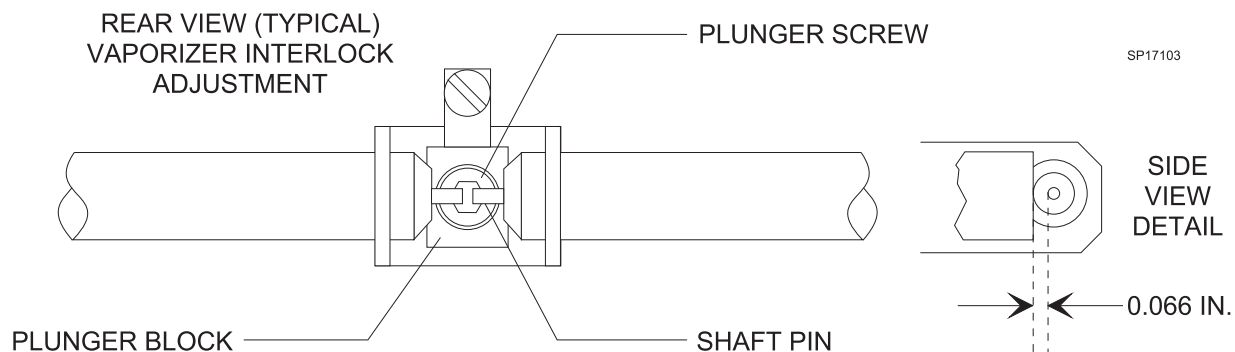


Figure 3: VAPORIZER INTERLOCK ADJUSTMENT

TEST PROCEDURE

Vapor Exclusion System Test:

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Set all vapors to zero (0). 2. Adjust the handwheel on the left vapor (viewed from the front of the machine) to any concentration above zero (0). 3. Is it possible to adjust the center vapor? ____ (N) 4. Is it possible to adjust the right vapor? ____ (N) 5. Set the handwheel on the left vapor to zero (0). 6. Adjust the handwheel on the center vapor to any concentration above zero (0). 7. Is it possible to adjust the left vapor? ____ (N) 8. Is it possible to adjust the right vapor? ____ (N) 9. Set the handwheel on the center vapor to zero (0). | <ol style="list-style-type: none"> 10. Adjust the handwheel on the right vapor to any concentration above zero(0). 11. Is it possible to adjust the left vapor? ____ (N) 12. Is it possible to adjust the center vapor? ____ (N) 13. Adjust the handwheel on the right vapor to zero (0). 14. Reinstall the cover over the vaporizer interlock mechanism. 15. Perform the PMS Procedure as outlined in Section 6 of the Narkomed GS Service Manual. 16. Document the exclusion system enhancement on the Vigilance Audit form or the PMS form as follows:

 <div style="margin-left: 20px;"> ☒ <u>Exclusion System Enhancement</u> </div> 17. Perform the vapor concentration test as outlined in SP00073. |
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